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Williams et al.

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(54) **DURALOCK SCRUBBER ATTACHMENT**

(71) Applicants: **Todd Allen Williams**, Huntington Beach, CA (US); **Cynthia Kay Williams**, Huntington Beach, CA (US)

(72) Inventors: **Todd Allen Williams**, Huntington Beach, CA (US); **Cynthia Kay Williams**, Huntington Beach, CA (US)

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(22) Filed: **May 2, 2017**

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(51) **Int. Cl.**

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A47L 13/24	(2006.01)
A46B 15/00	(2006.01)
A47L 13/255	(2006.01)
A47L 13/44	(2006.01)

(52) **U.S. Cl.**

CPC ***A47L 13/12*** (2013.01); ***A46B 15/0055*** (2013.01); ***A46B 15/0081*** (2013.01); ***A47L 13/24*** (2013.01); ***A47L 13/255*** (2013.01); *A46B 2200/302* (2013.01); *A47L 13/44* (2013.01)

(58) **Field of Classification Search**

CPC A47L 13/12; A47L 13/24; A47L 13/44; A46B 15/055; A46B 15/0081

See application file for complete search history.

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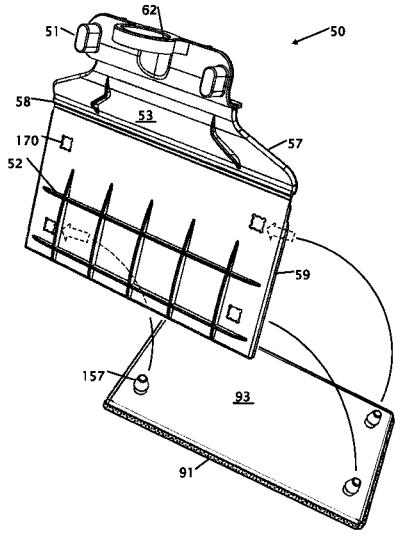
Primary Examiner — Shay Karls

(74) *Attorney, Agent, or Firm* — Kirk A. Buhler; Buhler & Associates Patenting

(57) **ABSTRACT**

A DuraLock scrubber and scraper attachments with replaceable surface scrubbing and scraping capability, that includes providing a removable/replaceable surface scrubbing and scraping attachments, and attaching the elements to the mop head holder for scrubbing and scraping the floor surface. This provides a mop handle with surface scrubbing and scraping capability and includes an attachment for rigid connection to a mop handle, which is adapted to carry replaceable surface cleaning element(s). The replaceable elements can be a scraper, scrubbing pad or bristles or other abrasive materials that can be interchanged or replaced depending upon the job or as the components wear without requiring removal of the mop head and further allows the replacement of the mop head without requiring removal and reinstallation of the elements.

20 Claims, 8 Drawing Sheets



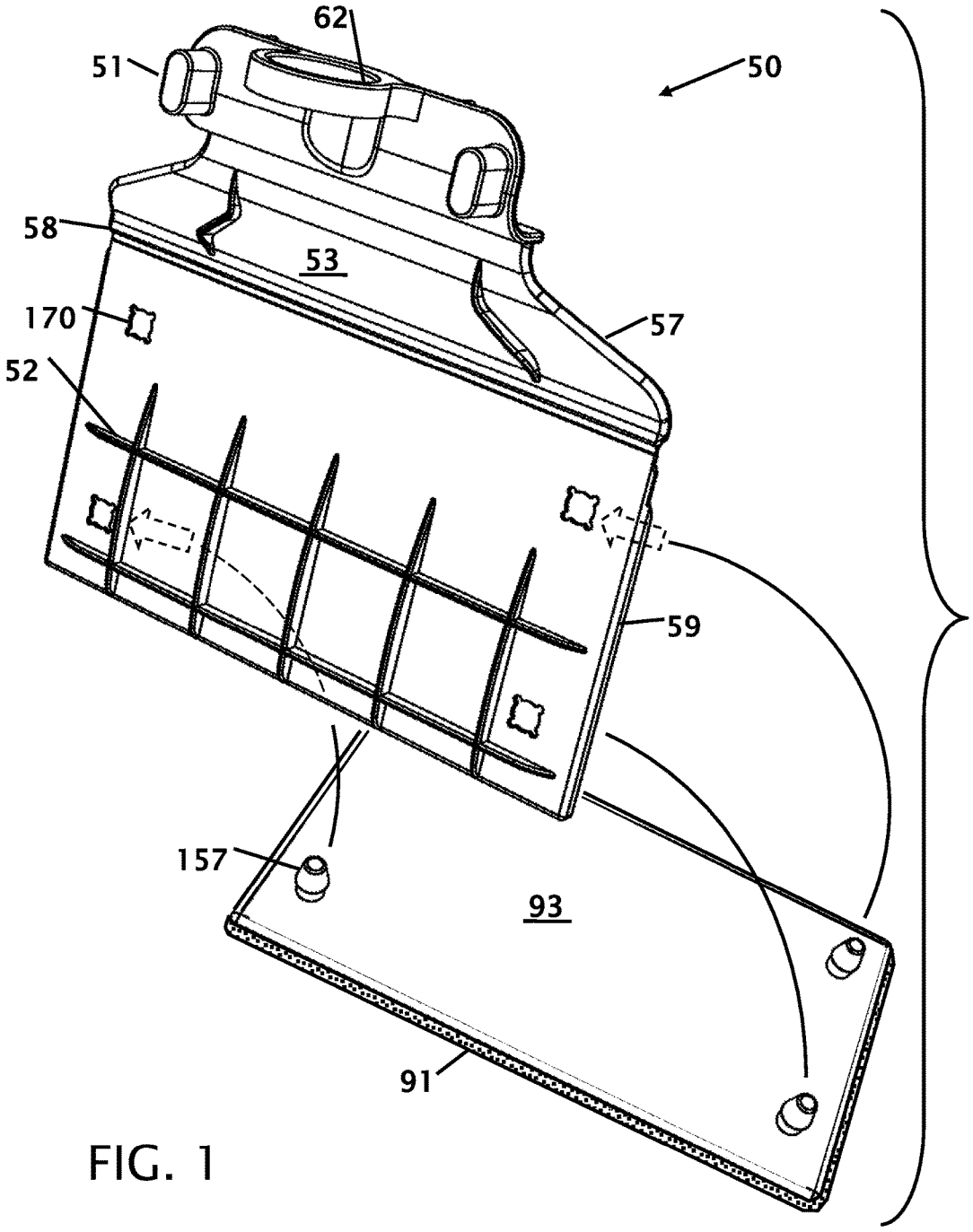


FIG. 1

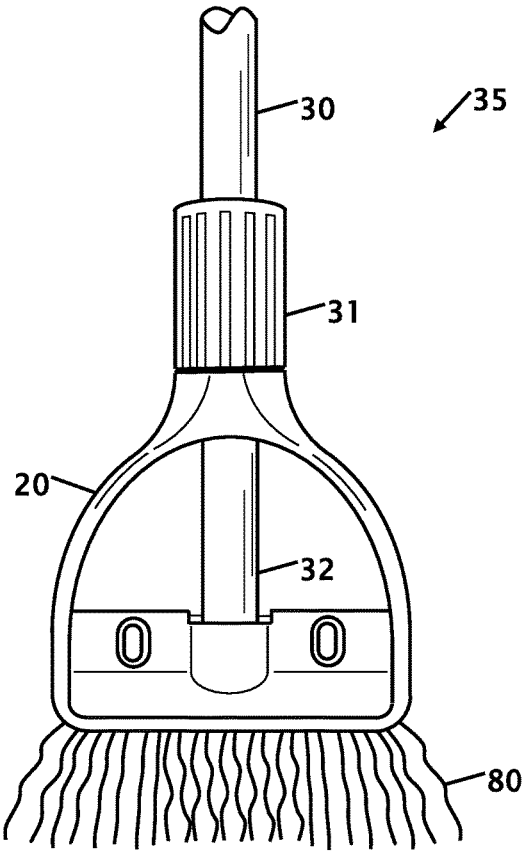


FIG. 2

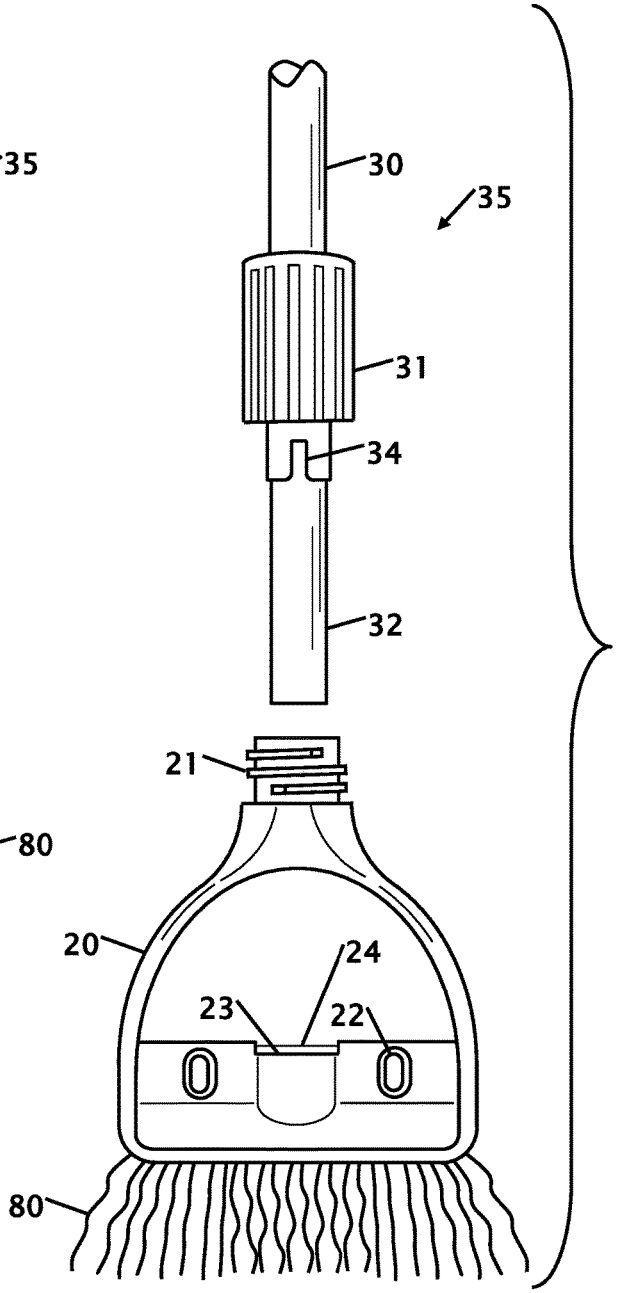


FIG. 3

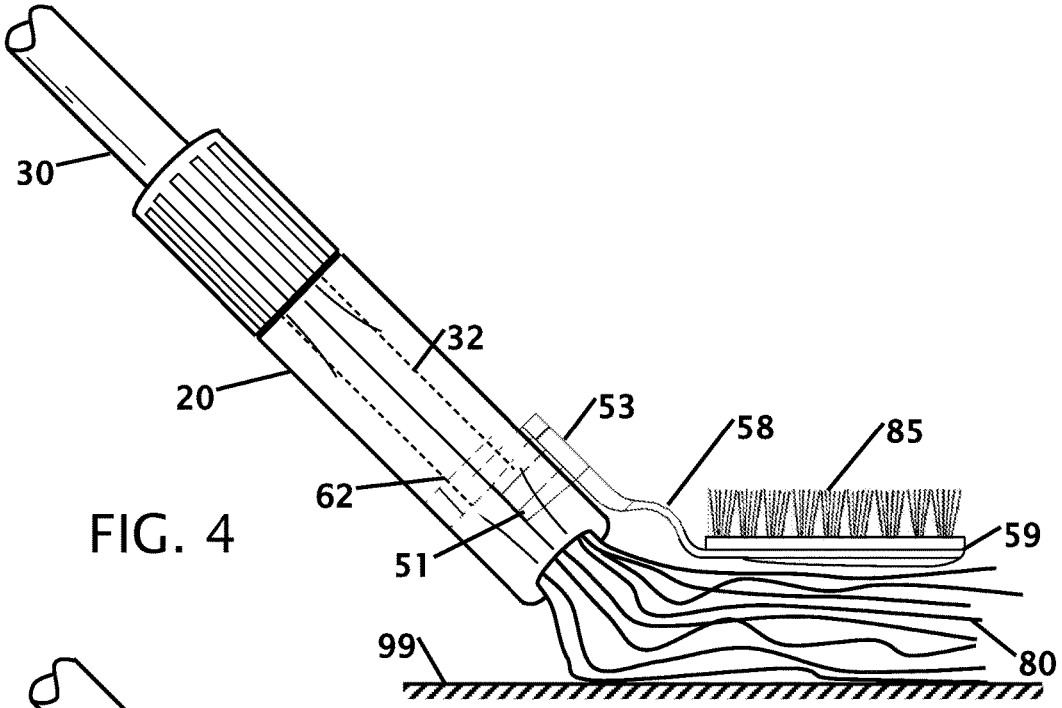


FIG. 4

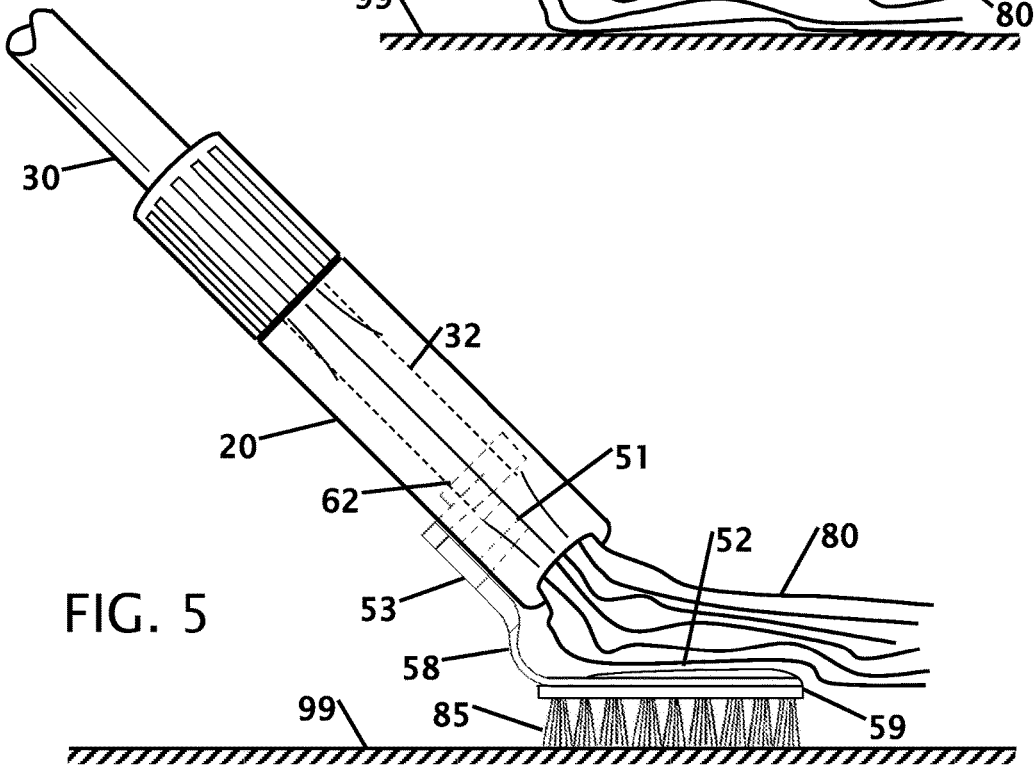


FIG. 5

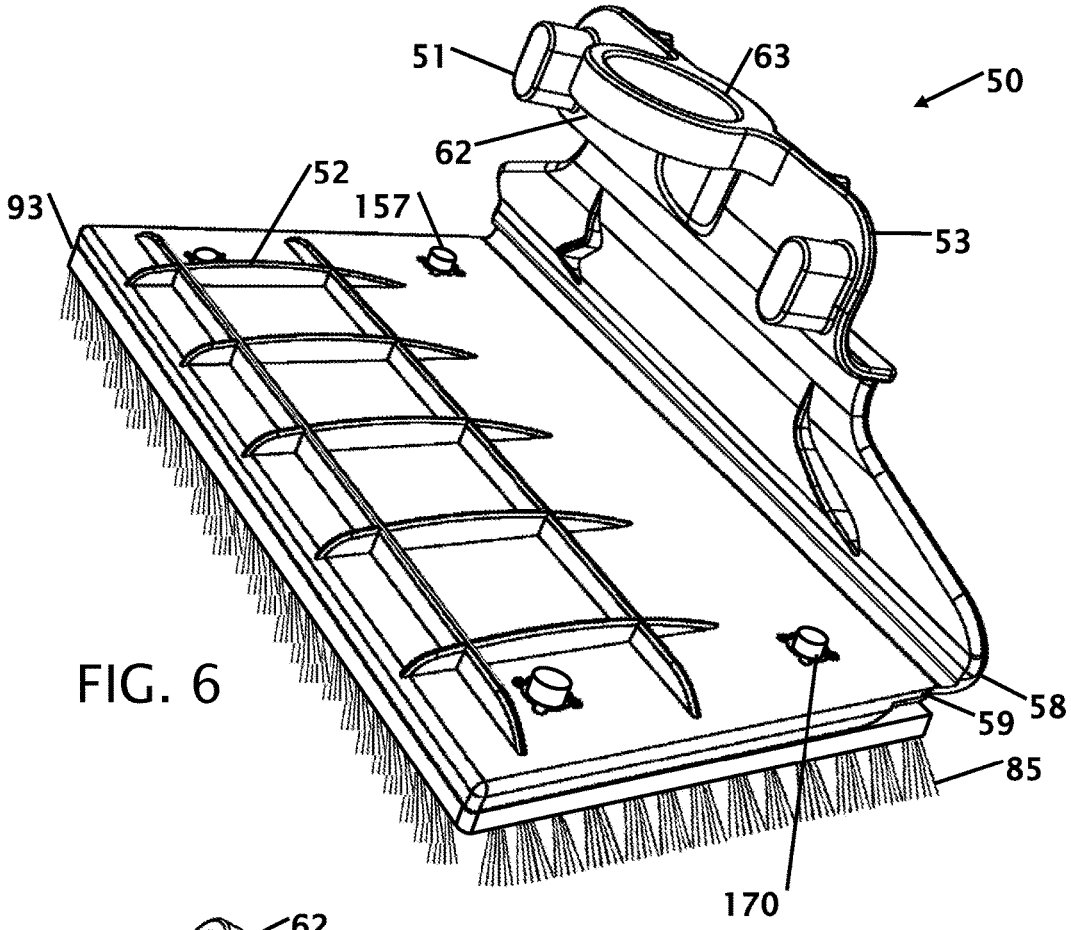


FIG. 6

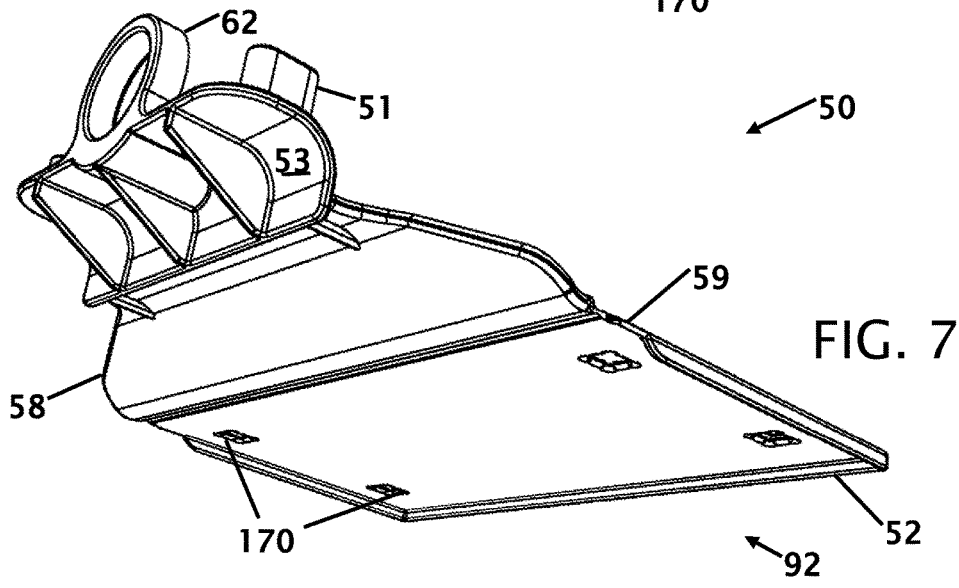


FIG. 7

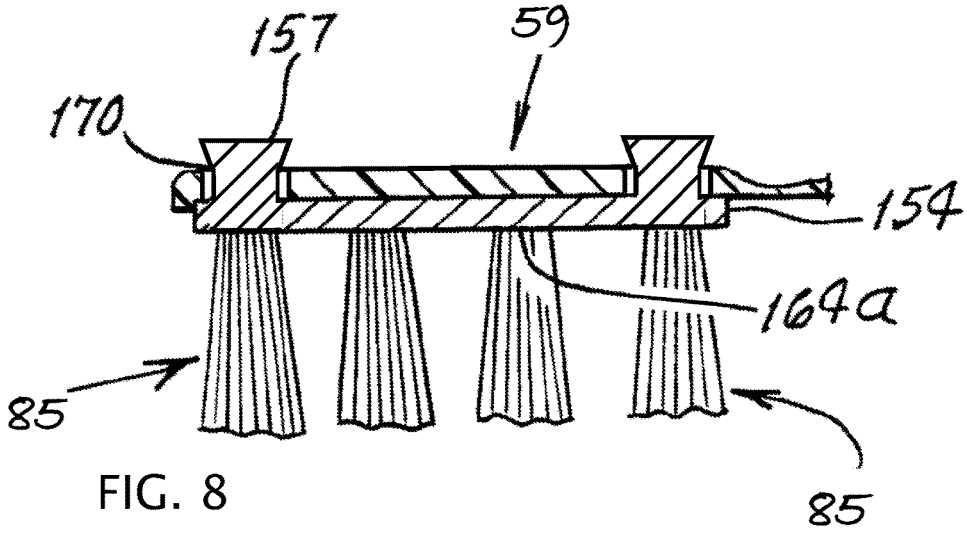


FIG. 8

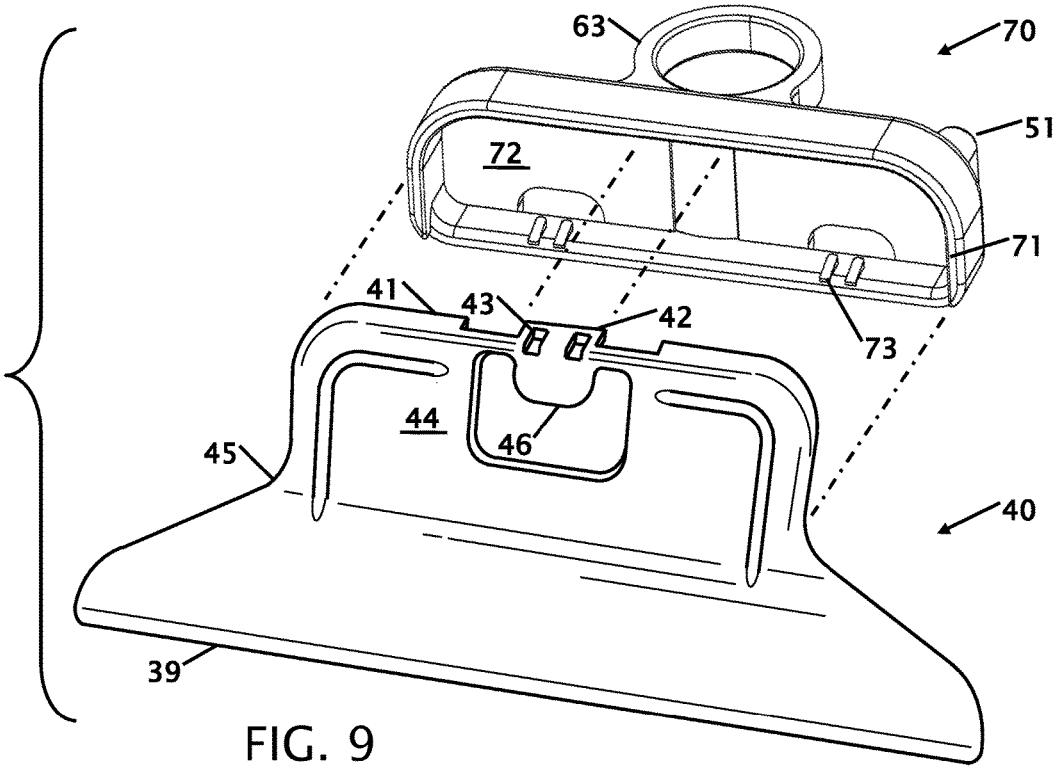


FIG. 9

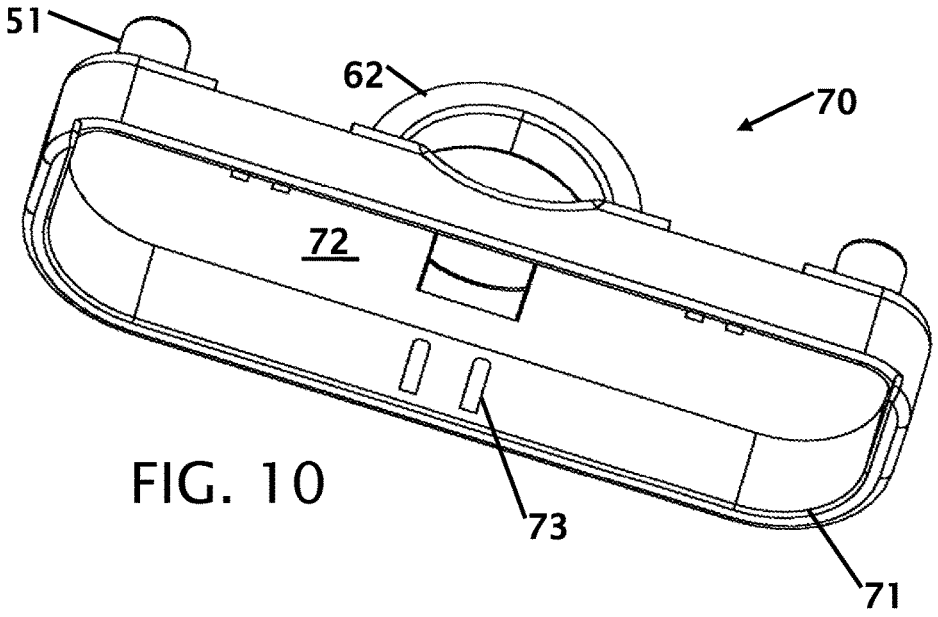


FIG. 10

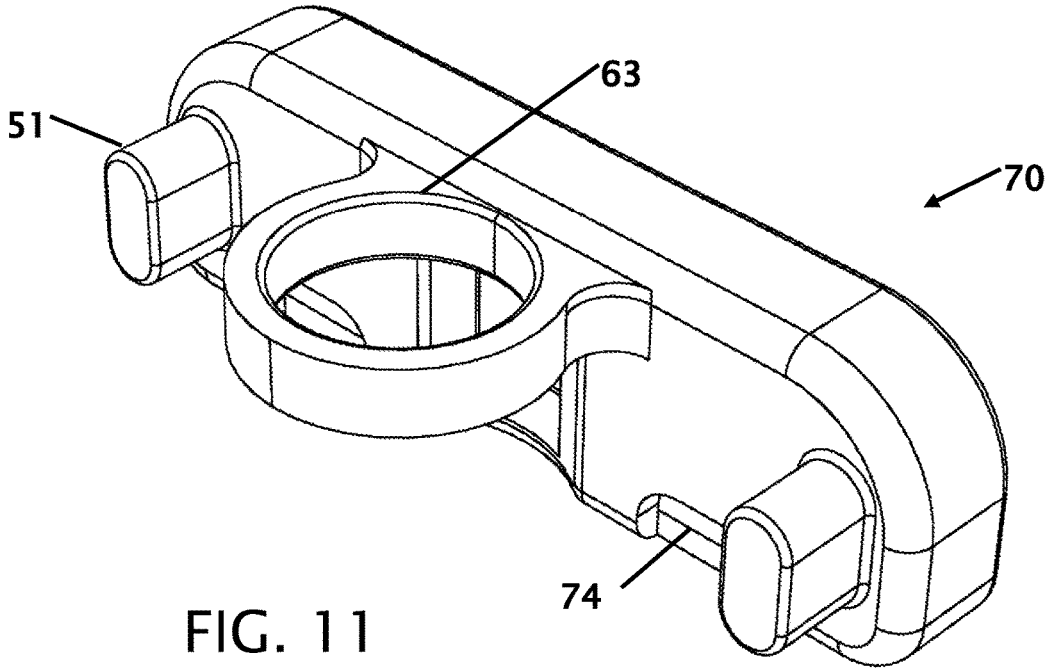


FIG. 11

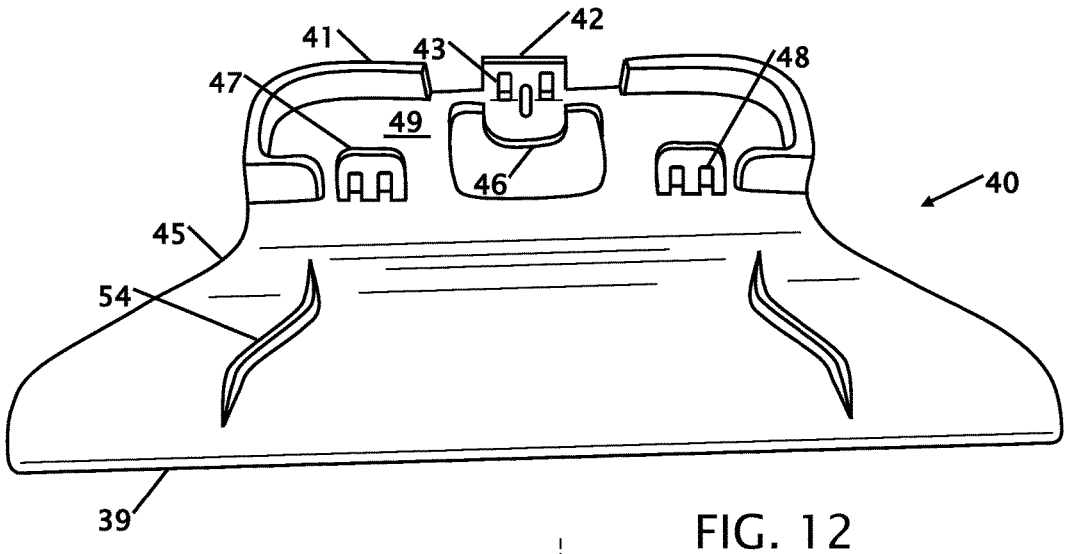


FIG. 12

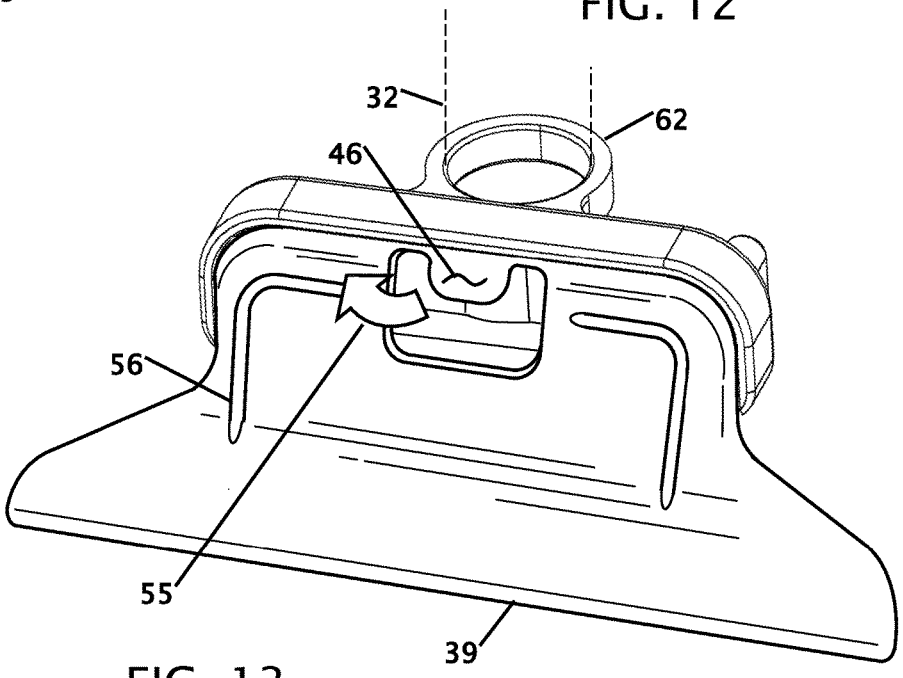


FIG. 13

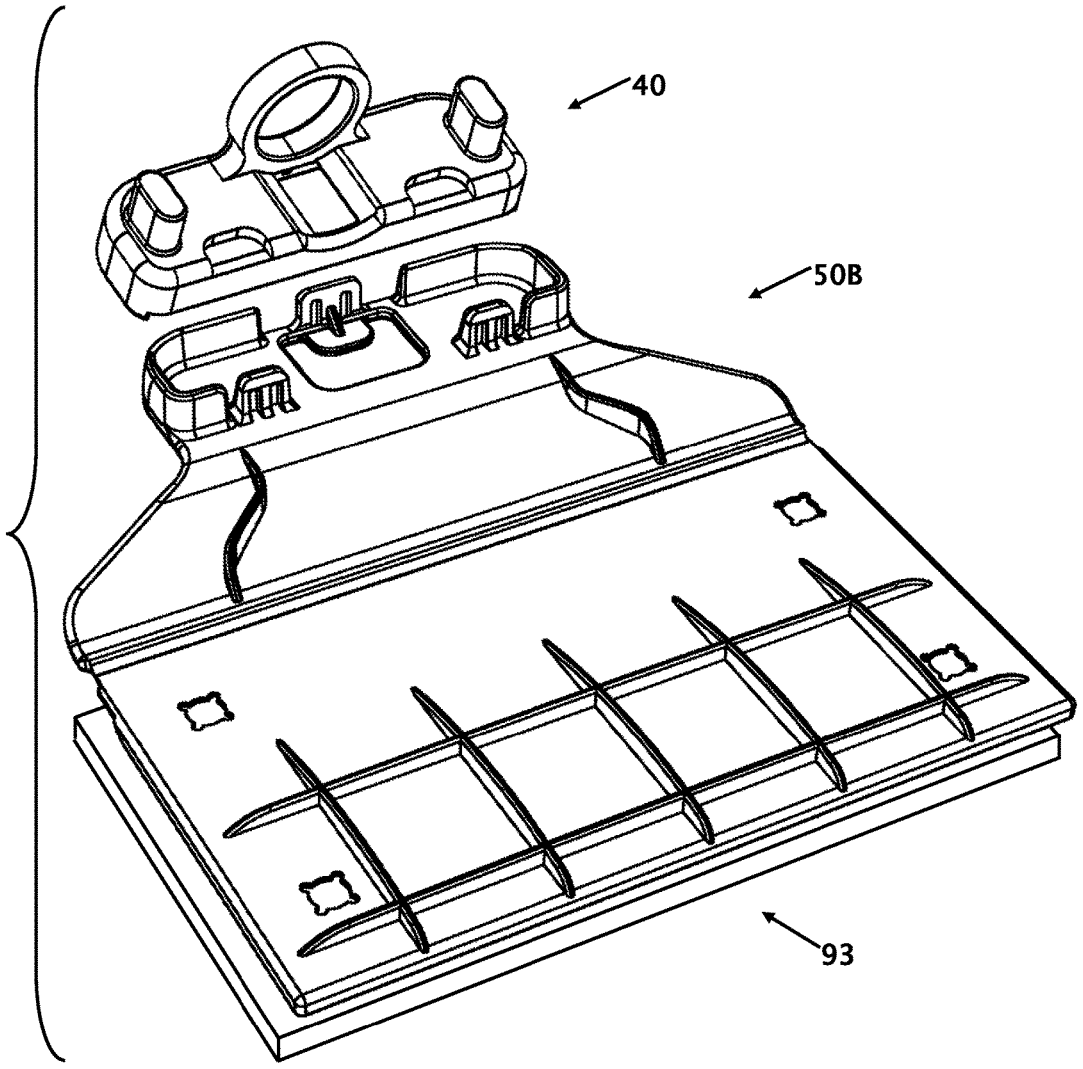


FIG. 14

DURALOCK SCRUBBER ATTACHMENT

CROSS REFERENCE TO RELATED APPLICATIONS

This application claims the benefit of Provisional Application Ser. No. 62/331,804 filed May 4, 2016 the entire contents of which is hereby expressly incorporated by reference herein.

STATEMENT REGARDING FEDERALLY SPONSORED RESEARCH OR DEVELOPMENT

Not Applicable

THE NAMES OF THE PARTIES TO A JOINT RESEARCH AGREEMENT

Not Applicable

INCORPORATION-BY-REFERENCE OF MATERIAL SUBMITTED ON A COMPACT DISC

Not Applicable

BACKGROUND OF THE INVENTION

Field of the Invention

This invention relates to improvements in a DuraLock scrubber attachment that is suitable for cleaning various floors with rough and porous surfaces such as clay, porcelain, glazed and concrete floor surfaces.

Description of Related Art including information disclosed under 37 CFR 1.97 and 1.98.

A typical mop implement comprises a bundle of fabric rags or yarns attached to the end of a mop handle. During a cleaning operation, the operator first dips the absorbent material of the mop head into a cleaning fluid (typically water with dissolved detergent) and then moves the mop head back and forth or in a figure eight motion on the floor surface to be cleaned. One problem with this type of mop implement is that although it can efficiently wipe smooth surfaces and remove loose debris and dirt, the mop cannot efficiently remove tough ground-in dirt, grease and hardened materials which is either built up in the grout lines of tiles, accumulate in the pores on the floor surface or adhere to the surface because the absorbent material is too soft and the contact area between the absorbent material and the floor surface is relatively large. With rough and porous floor surfaces, the contaminations tend to become stuck to the floor surface and accumulate within the pores of the floor surface. In many applications, a rough and porous floor surface is preferred for certain purposes, such as slip and fall protection. The floor of a restaurant's kitchen is typically made of clay or porcelain tiles with rough porous surfaces to protect people from slipping. To maintain this kind of floor surface, the ground-in dirt, grease and particles stuck to or accumulated within the porous surface must be periodically removed by manual scrubbing using a scrub brush with sufficiently hard bristles or abrasive pads. Preferably, a scrub brush or abrasive pad is used on such a floor at least once per day. However, in actual practice, a scrub brush or abrasive pad is used far less frequently, resulting in unnecessarily slippery and contaminated floor surfaces.

The combination of a mop and a scrub brush or abrasive pad into a single cleaning apparatus has been disclosed in the prior art, but solely for the purpose of allowing the user thereof to scrub scuff marks and other stains. In Canadian Patent No. 737,140, a combination floor mop is disclosed, which has a brush attachment that is articulated with manual operation of the handle. By tilting the handle against the mop holder at different angles, the brush can be put in a position either in direct contact or out of contact with the floor surface. Therefore, the operator can choose to use the mop or the brush alone, or to use both of them at the same time. Although certain advantages have been achieved by this cleaning apparatus, it has several significant disadvantages. First, the positions of the mop and the brush relative to the floor surface to be cleaned can only be adjusted by tilting the handle against the mop holder. For example, when the handle is in a vertical position (the handle is perpendicular to the mop holder surface) the brush is brought out of contact with the floor surface, when the handle is in a substantially horizontal position (the handle is parallel to the mop holder surface) the brush is moved forward to be in direct contact with the floor surface. Thus, in order to conduct different operation modes, the operator must operate the cleaning apparatus at different angles between the handle and mopping surface, and under certain angles it is very difficult and uncomfortable to operate. Secondly, the adjustable range of the brush is very limited.

U.S. Pat. No. 7,124,464 discloses a Scrubbing device attachable to a mop where the scrubbing device is clamped onto the mop handle. The entire device must be unclamped from the handle of the mop for removal or replacement of the mop head and the mop head must be removed to replace the scrubbing device. Once fastened, the mop handle and mop holder act as a clamp to hold the scrubbing device against the mop head. Consequently, considerable effort is required to remove or replace the scrubbing device, and it must be removed and reinstalled every time a mop head is replaced or adjusted, which can be very frequent. Due to having to remove the scrubbing device when changing the mop head, the device can become lost or broken, or simply not be reinstalled.

A common problem of the combined mop and scrubbing elements disclosed in the prior art is that the relative positions of the scrubbing elements and the absorbent material cannot be easily and independently adjusted for the purpose of providing different operation modes and an easy access to replacing and cleaning of the mop and the scrubbing element. Therefore, a need still exists for providing a cleaning apparatus for cleaning and scrubbing a floor surface, especially a rough and porous surface. Such cleaning apparatus should be readily adjustable to meet the cleaning requirements of different surfaces, should be easily replaceable and should not require removal of the device in order to replace a mop head and should allow for easy interchange of scrubbing attachments. A faster removal and securing method must be devised that allows for these requirements. Additionally, the scrubbing element should be attached to the mop handle as close as possible to the mop headband to allow for reduction in additional weight and raw material costs of the scrubbing element and the mounting mechanisms.

There is a need for improvements in surface scrubbing and mopping whereby the two operations are enabled by incorporating a quickly releasable securing system for attachment of a scrubbing pad or brush on a flexible joint or joints to obtain the optimal scrubbing angle on a mop head and mop handle. In particular, there is need for an attach-

ment that carries surface scrubbing elements, and which can easily and rapidly be connected to a mop handle, and preferably to mop handles of different configurations at the connecting location on the mop handles. Additionally, there is a need to mount the scrubbing element on the mop handle near the mop headband such that the scrubbing and or scraping element plate lies under the mop during operation.

BRIEF SUMMARY OF THE INVENTION

It is an object of the DuraLock scrubber attachment to provide method and apparatus meeting the above need. Basically, the improved apparatus provides a surface scrubbing element or elements, which can be comprised of bristles, abrasive pads or other scrubbing materials that can be attached to a handle such as the Ecolab, Inc., DuraLoc Wet Mop Handle or similar design with a similar mop head holder. As will be seen, the scrubbing element is configured for removable mounting to the mounting connection on the mop head holder, at or near the mop head. The mop head holder on the mop handle is either integrated in the molding of the handle or glued, threaded, inserted, riveted, or otherwise attached to the mop handle. The mounting connection on the mop head holder will be located on either side of the mop head holder, located at the end of the mop handle near the mop headband.

It is another object of the DuraLock scrubber attachment to provide an attachment secured to the mop head holder by allowing the mop handle to pass through a holding ring and utilizing fingers that fit into sockets on the mounting connection incorporated into the mop head holder. The scrubbing element can be removable and replaceable from the mop head holder without requiring removal of the mop head from the mop head holder, to allow a user to quickly replace or change the scrubbing element.

It is another object of the DuraLock scrubber attachment to provide flexible joints to allow the scrubbing element to bend relative to the mop handle to provide an optimal flat scrubbing surface. Because the scrubbing element is interchangeable, the dimensions and the scrub surfaces can be quickly changed, for example to clean a corner, narrow passage or a wide walkway, to allow for cleaning underneath low equipment or furniture, to allow for high and low spots on cleaning surfaces and to allow for efficient change in scrubbing materials.

Yet another object of the DuraLock scrubber attachment is to provide apparatus as referred to above which includes an element carrying scrubbing materials, that section having one or more flexible joints to the back plate of the DuraLock mounting connection. That plate may also advantageously include one or more flexible joints molded in position during plastic molding of the attachment, to accommodate and facilitate flap folding. The scrubbing elements may be carried by another plate which has attachment to the plate portion of the scrubbing element. Abrasive materials and scrubbing bristles may be glued, fused, staple set or otherwise attached in position to the plate portion, or other carrier which would be attached to the plate portion, as will be seen.

It is another object of the DuraLock scrubber attachment to not require the removal of the mop head during replacement of the scrubbing element, nor does it require removal of the scrubbing element in order to replace the mop head.

In still another embodiment the Duralock scraper is disclosed where replaceable scraping elements can be quickly installed, removed and replaced from the mop handle without removal of a securing head from the mop handle. This allows a person to quickly scrape and remove stuck debris from the floor without bending over.

Various objects, features, aspects, and advantages of the present invention will become more apparent from the following detailed description of preferred embodiments of the invention, along with the accompanying drawings in which like numerals represent like components.

BRIEF DESCRIPTION OF THE SEVERAL VIEWS OF THE DRAWING(S)

FIG. **1** is a perspective view of a DuraLock scrubber attachment.

FIG. **2** is a plan view of the mop handle and mop head holder in an assembled orientation.

FIG. **3** is a plan view of the mop handle and mop head holder in an unassembled orientation.

FIG. **4** is the DuraLock scrubber attachment on the mop handle being used in a first orientation.

FIG. **5** is the DuraLock scrubber attachment on the mop handle being used in a second orientation.

FIG. **6** is a side perspective view of the DuraLock scrubber attachment.

FIG. **7** is an opposite side perspective view of the DuraLock scrubber attachment showing the pad/bristles or other scrubbing material securing side.

FIG. **8** is a view like FIG. **6** showing another mode of scrubbing element, to which the scrubbing materials are attached and then the plate of that element is attached to the DuraLock scrubber attachment.

FIG. **9** is an exploded view of the DuraLock scraper attachment.

FIG. **10** is a perspective view of the DuraLock mounting base.

FIG. **11** is an alternate perspective view of the DuraLock mounting base.

FIG. **12** is perspective view of the DuraLock scraper.

FIG. **13** is as assembled view of the DuraLock scraper attachment installed in the mounting base.

FIG. **14** shows an alternate embodiment of the DuraLock scrubber attachment on the mounting base.

DETAILED DESCRIPTION OF THE INVENTION

FIG. **1** is a perspective view of a DuraLock scrubber attachment showing the removable portion **50** from a mop head holder. The removable portion **50** has a mounting back plate **53** having a pair of fingers **51** that extend into the mop head holder and a hole where the mop handle passes through the holding ring **62**. The back plate has a rigid plate structure **57** that maintains a parallel relationship with the mop handle. One or more flexible joints **58** connect the back plate **53** to a brush, pad or securing plate **59**. The securing plate **59** has a plurality of apertures **170**. The brush or scrubber securing plate **59** bends or flexes on the flexible joint **58**. Stiffening ribs **52** on the scrubber securing plate **59** are for structural purposes. In this embodiment, a replaceable scrubber plate **93** supports an abrasive surface **91**. In other embodiments, the scrubber plate **93** bristles or other surfaces. The replaceable scrubber plate **93** has a plurality of projections **157** that engage into the apertures **170** in the plate **59**.

FIG. **2** is a plan view of the mop handle and mop head holder in an assembled orientation and FIG. **3** is a plan view of the mop handle and mop head holder in an unassembled orientation. The entire mopping apparatus **35** has a handle

portion **30** that is removable from the lower section. The mop handle **30** has a coupling **31** with a key **34** that maintains the proper orientation of the handle to the mop head holder **20**. The shaft **30** of the handle extends through the coupling **31** where the lower portion of the handle **32** secures into the mop head holder at **23**. The mop head holder portion **20** has a threaded coupling **21** that secures in the coupling **31** in the handle. The mop head holder has sockets **22** where the fingers **51** (shown in FIG. **1**) engage for securing. The lower portion of the handle **32** fits through the threaded coupling **21**, then through the holding ring **62** (shown in FIG. **1**), and then into the mop head holder at **23** to secure the mop head holder and the DuraLock scrubber attachment. A release lever **24** may be incorporated to remove the mop **80** from the handle.

FIG. **4** is the DuraLock scrubber attachment on the mop handle being used in a first orientation and FIG. **5** is the DuraLock scrubber attachment on the mop handle being used in a second orientation. In both figures, the flexible joint **58** is shown bending with the mop strands **80** to use the brush **85** as shown in FIG. **5** or to keep the brush **85** away from the surface **99**, in FIG. **4**. In FIG. **5**, the tilted position for floor scrubbing by bristle group **85** engages with surface **99**. Note that handle **30** can be tilted substantially horizontally or vertically. Connection plate section **53** allows the removable connection between the DuraLock that connects to the mop head holder **20**. Because this is an interchangeable/replaceable component, a cleaning person can switch between a DuraLock brush **85** and a different DuraLock attachment of a different scrubbing material. The head mop strands **80** also engage the surface **99**.

The scrubber securing plate **59** supports the brush bristles **85** in a flat structure. The DuraLock scrubber attachment is shown secured to the lower mop handle **32** through the threaded coupling **21**, then through the holding ring **62** into the mop head holder **23** with fingers **51** engaged in the mop head holder sockets **22**. The backing plate **59** includes a plurality of structural ribs **52** that are engaged with the mop head.

FIG. **6** is a side perspective view of the DuraLock scrubber attachment and FIG. **7** is an opposite side perspective view of the DuraLock scrubber attachment showing the pad/bristles or other scrubbing material securing side. The replaceable scrubber plate **93** has a plurality of projections **157** that engage into the apertures **170** in the plate **59**.

The removable portion **50** has a mounting back plate **53** having a pair of fingers **51** that extend into the mop head holder **20** and a holding ring **62** where the mop handle passes the holding ring. The back plate **53** has a rigid plate structure that maintains a parallel relationship with the mop handle. One or more flexible joints **58** connect the back plate **53** to a scrubber securing plate **59**. The scrubber securing plate **59** bends or flexes on the flexible joint **58**. In this embodiment, the scrubber plate **59** has no flexible joints. In other embodiments, the scrubber securing plate **59** may be comprised of multiple flexible joints. Stiffening ribs **52** on the scrubber securing plate **59** are for structural purposes. The underside **92** of the scrubber securing plate **59** is where scrubbing materials would be glued, fused, staple set or otherwise attached or where a plate **154** containing scrubbing elements (as in FIG. **8**) would be connected. The apertures **170** of the plate **154** are visible extending through the removable portion **50**.

FIG. **8** is a side view of an embodiment where the scrubbing materials, either abrasive pads or bristles or the like are glued, fused, staple set or otherwise attached to a plate, which is then attached removably to the scrubber securing plate **59**. The apertures **170** in scrubber securing plate **59** receive projections **157** carried by a plate **164***a*. The bristle **85** plate **164***a* is attached to scrubber securing plate **59**, wherein projections **157** extend through apertures **170** in scrubber securing plate **59**.

While a particular connection between the mop head holder and the DuraLock element is shown, and described, the components can take various other configurations for securing the components and the connection features can be placed on either side of the mop head holder. Further, while one flexible joint is shown on the DuraLock replaceable scrubbing element, it is contemplated that more than one flexible joint can be incorporated into the plate **59** and the flexible joint described as **58**.

FIG. **9** is an exploded view of the DuraLock scraper attachments **40** and **70**. The attachments include the head unit **70** that secures to the mop handle. The mop handle passes through hole **63**. The removable portion **70** has a mounting back plate having a pair of fingers **51** that extend into the mop head holder and a hole **62** where the mop handle passes through the holding ring. The back plate **70** has a rigid plate structure that maintains a parallel relationship with the mop handle. The back plate **70** has an outer rim or wall **71** with a recessed pocket **72**. Within the pocket **72** is a plurality of retention features **73** or hooks. The pocket **72** and the retention features secure a variety of interchangeable components. In this figure, the interchangeable component is a floor scraper **40**.

The floor scraper **40** has a face **44** with an outer wall **41** that fits within the recessed pocket **72**. The scraper **40** has an angled surface that bends through radius **45**. The bend places the scraper at an optimal angle. The floor scraper **40** terminates at an edge **39** that engages on a floor surface to remove gum or other debris that has attached to a floor. The floor scraper **40** has complementary securing features **43** that engage in the securing features in the back plate **70**. The top securing features **43** exist on a tab **42** that flexes to lock into the back plate **70**. A finger tab **46** allows for bending the tab **42** to remove the floor scraper **40** from the back plate **70**. The floor scraper **40** is preferably made of plastic or metal.

FIG. **10** is a perspective view of the DuraLock mounting back plate **70** or head unit and FIG. **11** is an alternate perspective view of the DuraLock mounting base **70**. From these figures the recess pocket **72** is shown with the structural rim or lip **71** extending around the recessed pocket **72**. The structural rim **62** that supports the mop pole through the hole **63** is shown in both figures. The pair of fingers **51** or protrusions are shown extending from the back plate. In FIG. **10**, the securing hooks **73** are visible, and in FIG. **11**, the opening **74** that forms the hooks is visible.

FIG. **12** is perspective view of the DuraLock scraper **40**. The floor scraper **40** has a face **49** with an outer wall **41**. The scraper **40** has an angled surface that bends through radius **45**. The bend places the scraper at an optimal angle. The floor scraper **40** terminates at an edge **39** that engages on a floor surface to remove gum or other debris that has attached to a floor. The floor scraper **40** has complementary securing features **43** that engage in the securing features in the back plate. The top securing features **43** exist on a tab **42** that flexes to lock into the back plate. A finger tab **46** allows for bending the tab **42** to remove the floor scraper **40** from the back plate. Elevated tabs **47** have securing locks **48** that temporally locks the floor scraper **40** on the back plate. The floor scraper **40** has structural ribs **54** to help the scraper to maintain a rigid scraping edge **39** to remove gum or other stuck debris from a floor.

FIG. **13** is as assembled view of the DuraLock scraper attachment installed in the mounting base with a mop handle **32** that extends through the hole in the holding ring **62**. This view of the scraper **39** shows additional structural ribs **56** to reduce bending on the support structure of the scraper. This figure shows that the tab **46** is lifted **55** to bend the locking tabs out of the way and allow the scraper to be removed from the back plate. This allows a worker to install, replace and remove the scraper. The scraper provides minimal interference of the mop.

From the figures in this disclosure provide for providing a DuraLock scrubber attachment **50** that is securable to a mop handle **32** having a mop head holding section which has a hole **63** where the mop handle **32** passes. The DuraLock scrubber attachment **50** has one or more fingers **51** in the back plate **53** that is configured to engage in sockets **22** of the mop head holder and a hole **63** whereby the mop handle **32** passes. The DuraLock scrubber attachment **50** has at least one flexible joint **58** between the back plate **53** and the one or more engaging fingers **51** and a scrubber securing plate **52**. The backing securing plate **52** supports a replaceable scrubber plate **93** wherein scrubbing materials are attached or wherein another plate containing scrubbing materials is attached. The scrubbing element is provided as a floor scrubber, and the replaceable scrubber plate **93** has locking feature **157** that temporally secures the replaceable scrubber plate **93** to the backing plate **59**.

The locking feature is a plurality of apertures **170** in the backing plate **52**. The locking feature is a plurality of protrusions **157** in the replaceable scrubber plate **93**. The floor scrubber **93** is selected from a group consisting of bristles **85**, pads **91** or other abrasive materials. The bristles **85** have supporting portions fused to a base **154** defined by the device. The scrubber defines projecting floor scrubbing 85 elements. The flexible joint **85** is a living hinge. The flexing joint is positioned (as shown in FIG. **5**) to support the replaceable scrubber plate **59** by the mop handle **30**. FIG. **4** shows that the flexible joint **58** flexes above the mop head. The backing plate **59** includes a plurality of structural ribs **52** that are engaged with the mop head.

The DuraLock scraping attachment has interchangeable surface scraping capability, that includes a scraping attachment **40** that can be secured to a mop handle **32** having a mop head holding section **70** which has a hole **63** where the mop handle **32** passes. The mop head holding section **70** has one or more fingers **51** in the back plate **72** configured to engage in sockets **22** of the mop head holder and a hole **63** whereby the mop handle **32** passes. The scraping attachment **40** has a securing head unit that extends from the hole **63**. The securing head **70** supports a replaceable scraping element **40** that is removably secured to the securing head **70**. The scraping element **40** provides a floor scraper in the form of a plate attached by a flexing bend **45** that extends away from the mop head.

The back plate **70** has a recess **72**. The backing plate **70** has a supporting rib structure **71** that extends around the recess **72**. The supporting structure rib **71** has a plurality of securing hooks **73**. The replaceable scaping element **40** has a plurality of complimentary locks **48** that temporarily retain the replaceable scraping element **40** in the securing head **70**. The replaceable scraping element **40** has a back plate **44** and an outer rim **41**, and the outer rim **41** engages into the supporting rib structure **71** of the backing plate **70**. The replaceable scraping element **40** has a flexible tab **46** that is articulated **55** to release the replaceable scraping element **40** from the backing plate **70**. The replaceable scraping element **40** has a scraping edge **39** that flairs from the securing head **70**. The replaceable scraping element **40** has a plurality of structural ribs **54**, **56** that extend through the flexing bend **45**. The replaceable scraping element is made of plastic or metal.

FIG. **14** shows an alternate embodiment of the DuraLock scrubber attachment on the mounting base. It should be understood that the connection between the back plate **70** can be applied to other quick disconnect and replaceable brushes, scrubbers and other attachments like the embodiment of the flexible attachment **50**B, in this figure, with the replaceable scrubber plate **93** that has been previously shown and described.

Thus, specific embodiments of a replaceable scrubbing and scaping element attachable to a mop handle have been disclosed. It should be apparent, however, to those skilled in the art that many more modifications besides those described are possible without departing from the inventive concepts herein. The inventive subject matter, therefore, is not to be restricted except in the spirit of the appended claims.

The invention claimed is:

1. A DuraLock scrubber attachment with interchangeable surface scrubbing capability, that includes:

a) providing a DuraLock scrubber attachment that is securable to a mop handle having a mop head holding section which has a hole where said mop handle passes;

b) said DuraLock scrubber attachment has one or more fingers in a back plate configured to engage in sockets of said mop head holding section and said hole;

c) said DuraLock scrubber attachment has at least one flexible joint between a backing securing plate with one or more engaging fingers and a scrubber securing plate;

d) said backing securing plate supports a replaceable scrubber plate wherein scrubbing materials are attached or wherein another plate containing scrubbing materials is attached;

e) wherein a scrubbing element is provided a floor scrubber, and

f) said replaceable scrubber plate has locking feature that temporally secures said replaceable scrubber plate to said backing securing plate.

2. The DuraLock scrubber attachment of claim **1**, wherein said locking feature is a plurality of apertures in said backing securing plate.

3. The DuraLock scrubber attachment of claim **2**, wherein said locking feature is a plurality of protrusions in said replaceable scrubber plate.

4. The DuraLock scrubber attachment of claim **1**, wherein said floor scrubber is selected from a group consisting of bristles, pads or other abrasive materials.

5. The DuraLock scrubber attachment of claim **4**, wherein the bristles have supporting portions fused to a base defined by the device.

6. The DuraLock scrubber attachment of claim **1**, wherein said floor scrubber defines projecting floor scrubbing elements.

7. The DuraLock scrubber attachment of claim **1**, wherein said flexible joint is a living hinge.

8. The DuraLock scrubber attachment of claim **1**, wherein said flexible joint is positioned to support said replaceable scrubber plate by said mop handle.

9. The DuraLock scrubber attachment of claim **8**, wherein said flexible joint flexes above said mop head.

10. The DuraLock scrubber attachment of claim **8**, wherein said backing securing plate includes a plurality of structural ribs that are engaged with said mop head.

11. The DuraLock scrubber attachment of claim **1**, wherein said back plate includes at least two fingers.

12. The DuraLock scrubber attachment of claim 11, wherein said at least two fingers are configured to engage in a said mop head holding section.

13. The DuraLock scrubber attachment of claim 12, wherein said at least two fingers reduce rotation of said DuralLock scrubber attachment on said mop holding section.

14. The DuraLock scrubber attachment of claim 1, wherein said flexible joint is perpendicular to said hole.

15. The DuraLock scrubber attachment of claim 1, wherein flexible joint has a pocket.

16. The DuraLock scrubber attachment of claim 15, wherein said pocket supports a scrapper.

17. The DuraLock scrubber attachment of claim 15, wherein said scraper is temporally securable on said pocket.

18. The DuraLock scrubber attachment of claim 15, wherein said scraper is flexible relative to said pocket.

19. The DuraLock scrubber attachment of claim 15, wherein said pocket has at least one retention hook.

20. The DuraLock scrubber attachment of claim 15, wherein said scraper is angled from said back plate.

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